



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,188	02/27/2004	Ulf R. Hanebutte	INT.P013	6945
45512	7590	12/23/2005	EXAMINER	
LAWRENCE CHO C/O PORTFOLIOIP P. O. BOX 52050 MINNEAPOLIS, MN 55402			LE, JOHN H	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/789,188

Applicant(s)

HANE BUTTE, ULF R.

Examiner

John H. Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/17/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9, 11-15, 18, 19, 21 and 23-30 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 10, 16, 17, 20 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. This office action is in response to applicant's amendment received on 10/17/2005.

Claims 1-6, 9, 18, 21, 24-26 have been amended.

Claims 29-30 have been added.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 25-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Potega (US 2003/0085621).

Regarding claim 25, Potega discloses a power management system include a power evaluation unit (e.g. [0145]), comprising: a data retriever unit (sensor 703) to retrieve (acquire) power data from an operating system (supplied device) (e.g. [0272]-[278]); and a data processor unit (microcontroller) to determine a net power consumption of an application from the power data (e.g. [0273]-[0282]).

Regarding claim 26, Potega discloses the power data comprises power capacity 9e.g. [0149]) and drain rate data from a battery (e.g. [0186]).

Regarding claim 27, Potega discloses a data evaluation unit to determine a systematic error associated with a run-time for the power data (e.g. [0118]).

Regarding claim 28, Potega discloses the data evaluation unit determines a new run-time that reduces the systematic error (e.g. [0489]).

Regarding claim 29, Potega discloses a method for managing power system (power management software) comprising: determining net power consumption of an application from power data supplied to an operating system (e.g. [0274]-[0277]), determining a systematic error of power data used to determining the net power consumption (e.g. [0118], [273]-[0275]).

Regarding claim 29, Potega discloses determining system error (power supply error [0118]) comprise determining an update granularity of power data (power supply data update by software, [0431]).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-7, 18-19, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thelander et al. (US 2003/0009705) in view of Potega (US 2003/0085621).

Regarding claims 1, 18, Thelander et al. disclose a method for managing power data ([0008]), comprising: determining an amount of power used by a system running an application over a first time period from an operating system (e.g. [0056], [0058]-[0060]); determining an amount of power used by the system in a baseline state over a second time period from the operating system (e.g. [0056], [0058]-[0060], [0093]); and determining a net power consumption of the application from the amount of power used for the system running the application and the amount of power used by the system in the baseline state (e.g. [0056], [0093]).

Thelander et al. fail to disclose determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period.

Potega teaches steps of determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period (computer running power management software monitors status of battery and control power supplied, [282]-[285], [183]-187]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform steps of determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period as taught by Potega in a method for managing power data of Thelander et al. for the purpose of providing a intelligent power supply (Potega, [0081]).

Regarding claim 2, Thelander et al. teach subtracting a power capacity value of a battery at an end of the first time period from a power capacity value of the battery at a beginning of the first time period (e.g. Fig.4, [0044]-[0045]).

Regarding claim 4, Thelander et al. teach determining the amount of power used by the system in the baseline state comprises subtracting a power capacity value of a battery at an end of the second time period from the power capacity value of the battery at a beginning of the second time period (e.g. Fig.15, [0093]).

Regarding claim 5, Thelander et al. teach determining the amount of power used by the system in the baseline state comprises integrating a drain rate of the battery over the second time period (e.g. Fig.4, [0044]-[0045]).

Regarding claim 6, Thelander et al. teach determining the net power consumption of the application comprises subtracting the amount of power used by the system in the baseline state over the time period from the amount of power used by the system running the application over the time period (e.g. Fig.4, [0044]-[0045]).

Regarding claims 7, 19, Thelander et al. teach determining the net power consumption of the application comprises computing a first net power value using power capacity data and a second net power data using drain rate data (e.g. Fig.4, [0044]-[0045]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform steps of determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period as taught by Potega in a method for

managing power data of Thelander et al. for the purpose of providing a intelligent power supply (Potega, [0081]).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thelander et al. (US 2003/0009705) in view of Potega (US 2003/0085621) as applied to claim 1 above, and further in view of Mantani (US 2003/0226049).

Regarding claim 3, Thelander et al. teach determining the amount of power used for the system running the application comprises integrating a drain rate of the battery over the first time period.

Mantani teaches determining the amount of power used for the system running the application comprises integrating a drain rate of the battery over the first time period (e.g. [0089], [0092]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform determining the amount of power used for the system running the application comprises integrating a drain rate of the battery over the first time period as taught by Mantani in a method for managing power data of Thelander et al. in view of Potega for the purpose of providing a control unit detects a change in the remaining power source energy in the specific state (Mantani, [0032]).

7. Claims 9, 11, 12, 21, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thelander et al. (US 2003/0009705) in view of Culbert et al. (US 5,600,841).

Regarding claims 9, 21, Thelander et al. fail to determining a systematic error of power data.

Culbert et al. teach determining a systematic error of power data (e.g. Col.7, lines 52-66).

Regarding claims 11 and 23, Culbert et al. teach generating an indication if the systematic error exceeds a predetermined value (e.g. Col.8, lines 8-12).

Regarding claims 12, 24, Culbert et al. teach providing a suggested run-time (e.g. Col.1, lines 41-47) to reduce the systematic error (e.g. Col.8, lines 8-12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform determining a systematic error of power data as taught by Culbert et al. in a method for managing power data of Thelander et al. for the purpose of providing a system for controlling power in electronic devices (Culbert et al., Col.1, lines 11-14).

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thelander et al. (US 2003/0009705) in view of Ben-Meir et al. (USP 5,652,893).

Regarding claims 13, Thelander et al. teach a method for managing power data, comprising: collecting power data for a system running an application from an operating system over a first time period (e.g. [0056], [0058]-[0060]); collecting power data for the system in a baseline state from the operating system over a second time period (e.g. [0056], [0058]-[0060], [0093]); and determining a net power consumption of the application from the power data (e.g. [0056], [0093]).

Thelander et al. fail to teach determining whether the update frequency for the power data is sufficient.



Ben-Meir et al. teach determining whether the update frequency for the power data is sufficient (e.g. Col.17, lines 60-67, Col.18, lines 29-64).

Regarding claim 14, Thelander et al. teach the first time period and the second time period are of equal duration (e.g. Fig.4).

Regarding claim 15, Ben-Meir et al. teach transmitting an indication that the power data is invalid if the update frequency is insufficient (e.g. Col.18, lines 53-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform determining whether the update frequency for the power data is sufficient as taught by Ben-Meir et al. in a method for managing power data of Thelander et al. for the purpose of providing a automated, real-time, intelligent power management system (Ben-Meir et al., Col.2, lines 65-66).

### ***Allowable Subject Matter***

9. Claims 6, 8, 10, 16-17, 20, 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 6, none of the prior art of record teaches or suggests the combination of a method for managing power data, comprising: determining an amount of power used by a system running an application over a first time period from power data supplied to an operating system by a battery over the first time period; determining

an amount of power used by the system in a baseline state over a second time period from power data supplied to the operating system by the battery over the second time period; and determining a net power consumption of the application from the amount of power used by the system running the application and the amount of power used by the system in the baseline state, wherein determining the net power consumption of the application comprises subtracting the amount of power used by the system in the baseline state over the second time period from the amount of power used by the system running the application over the first time period. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 8, none of the prior art of record teaches or suggests the combination of a method for managing power data, comprising: determining an amount of power used by a system running an application over a first time period from power data supplied to an operating system by a battery over the first time period; determining an amount of power used by the system in a baseline state over a second time period from power data supplied to the operating system by the battery over the second time period; and determining a net power consumption of the application from the amount of power used by the system running the application and the amount of power used by the system in the baseline state, wherein determining the net power consumption of the application comprises computing a first net power value using power capacity data and a second net power data using drain rate data, and generating an indication if the

difference between the first and the second net power values exceeds a threshold value. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 10, none of the prior art of record teaches or suggests the combination of a method for managing power data, comprising: determining an amount of power used by a system running an application over a first time period from power data supplied to an operating system by a battery over the first time period; determining an amount of power used by the system in a baseline state over a second time period from power data supplied to the operating system by the battery over the second time period; and determining a net power consumption of the application from the amount of power used by the system running the application and the amount of power used by the system in the baseline state, wherein determining the systematic error comprises: determining an update granularity of the power data; and dividing the update granularity of the power data by the first time period. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 16, none of the prior art of record teaches or suggests the combination of a method for managing power data, comprising: collecting power data for a system running an application from an operating system over a first time period; collecting power data for the system in a baseline state from the operating system over a second time period; determining whether the update frequency for the power data is

sufficient; and determining a net power consumption of the application from the power data if the update frequency for the power data is sufficient, and determining a new run-time to run the application if the update frequency is insufficient. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 20, none of the prior art of record teaches or suggests the combination of an article of manufacture comprising a machine accessible medium including sequences of instructions the sequences of instructions including instructions which when executed causes the machine to perform: determining an amount of power used for a system running an application over a first time period from an operating system; determining an amount of power used for the system in a baseline state over a second time period from the operating system; and determining a net power consumption of the application from the amount of power used for the system running the application and the amount of power used for the system in the baseline state; wherein determining the net power consumption of the application comprises computing a first net power value using power capacity data and a second net power data using drain rate data and wherein sequences of instructions including instructions which when executed performs generating an indication if the difference between the first and the second net power values exceeds a threshold value. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found,

taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 22, none of the prior art of record teaches or suggests the combination of an article of manufacture comprising a machine accessible medium including sequences of instructions the sequences of instructions including instructions which when executed causes the machine to perform: determining an amount of power used for a system running an application over a first time period from an operating system; determining an amount of power used for the system in a baseline state over a second time period from the operating system; and determining a net power consumption of the application from the amount of power used for the system running the application and the amount of power used for the system in the baseline state; wherein sequences of instructions including instructions which when executed performs determining a systematic error of power data used for determining the amount of power used for the system running the application and wherein determining the systematic error comprises determining an update granularity of the power data; and dividing the update granularity of the power data by the first time period. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

### ***Response to Arguments***

6. Applicant's arguments filed 10/17/2005 have been fully considered but they are not persuasive.

-Applicant argues that the prior did not teach “determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period” as cited in claims 1, 18.

Examiner position is that Potega teaches steps of determining an amount of power used by a system running an application over the time period from power data supplied to an operating system by a battery over the time period (computer running power management software monitors status of battery and control power supplied, [282]-[285], [183]-187]).

-Applicant argues that the prior did not teach, “determining whether the update frequency for the power data is sufficient” as cited in claim 13.

Examiner position is that Ben-Meir et al. teach determining whether the update frequency for the power data is sufficient (e.g. Col.17, lines 60-67, Col.18, lines 29-64).

-Applicant argues that the prior did not teach, “determining a systematic error of power data” as cited in claims 9, 21, and 27.

Examiner position is that Potega discloses a data evaluation unit to determine a systematic error associated with a run-time for the power data (e.g. [0118]).

Examiner position is that Culbert et al. teach determining a systematic error of power data (e.g. Col.7, lines 52-66).

### ***Conclusion***

8. Specifically Potega, Ben-Meir et al. has been added to second ground of rejection.

***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

December 20, 2005

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800